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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,460	02/19/2004	James Hugh Reho	5128.104	4859
20792	7590	10/19/2006	EXAMINER CHOI, FRANK I	
MYERS BIGEL SIBLEY & SAJOVEC PO BOX 37428 RALEIGH, NC 27627			ART UNIT 1616	PAPER NUMBER

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/782,460	Applicant(s) REHO ET AL.	
	Examiner Frank I. Choi	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3-8 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a composition which contains all of the components and is a solution produced from intestinal and testicular tissue of the male blue crab by extraction with toluene or using non-rotting testicular material in gelatin, does not reasonably provide enablement for single components or mixtures of components separated and purified from said tissue, or extractions of intestinal and testicular tissue of a male blue crab that do not contain all of the components listed on pages 1 and 2 of the Specification and are not toluene extractions or isolates of testicular or testicular and intestinal material which does not contain the unpurified material and separated only to the extent that said material is dissected from the body of the male blue crab and mixed with other materials, such as gelatin. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

The nature of the invention:

The invention is directed to a mixture of components that comprises any combination of the listed components produced from intestinal and testicular tissue of male blue crab or homogenous emulsion of testicular or testicular and intestinal material isolated from a male blue crab and methods of using the same to attract female blue crabs. The amendment to the claims

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and the new claims did not significantly alter the scope of the claims from the prior claims for purposes of scope of enablement. Claim 1 is open-ended via the transitional phrase “comprising” and includes contains any combination and amounts of the listed compounds. The limitation that the composition be produced from intestinal and testicular tissue of a male blue crab does not limit the claim to only materials that are derived from said tissue as said composition can be combined with other materials (See claim 3). Further, notwithstanding the fact that the disclosure does not enable one of ordinary skill in the art to separate and purify the components claimed, claim 1 encompasses separated and purified components from said tissue. Claim 4 is directed to a method of using the composition of claim 1 to attract female blue crabs to a trap with an effective amount of said composition. As such, claims 1,3-4 do not require that un separated and/or unpurified components present in said tissue be present in the composition. Claim 5 is directed to a homogenous emulsion of isolated testicular material from a male blue crab without otherwise indicating the form or contents of said isolate. As such, said claim encompasses within its scope separated and purified components or mixtures thereof in any amount that may or may not include the components or mixture of components listed in claim 1. Claim 6 is dependent on claim 5 adds intestinal material isolated from a male blue crab without otherwise indicating the form or contents of said isolate. As such, said claim encompasses within its scope separated and purified components or mixtures thereof in any amount that may or may not include the components or mixture of components listed in claim 1. Claims 7 and 8 are directed to methods of attracting female blue crabs to a trap with an effective amount of the compositions in claims 5 and 6, respectively. As such, claims 5-8 do not require that unseparated

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and/or unpurified material present in testicular tissue or testicular and intestinal tissue from a male blue crab be present in the claimed compositions.

The state of the prior art and the predictability or lack thereof in the art:

The prior art of record does not appear to disclose a female blue crab attractant containing two or more of the claimed components produced from testicular and intestinal tissue of male blue crab or a homogenous emulsion of testicular or testicular and intestinal material isolated from a male blue crab. The prior art of record only indicates that there is evidence that male blue crabs produce an odor that attracts female blue crabs but that the active components are unknown and the source or sources of said active components are unknown. . See Bushmann, pgs. 67, 68 (it is unknown what compounds result in courtship signals or the source of the same; this knowledge awaits the purification and structural description of these chemical signals). Further, it is unlikely that all of the components claimed in claim 1 would be present in both testicular and intestinal tissue and/or in the same amounts and ratios in both testicular and intestinal tissue. See e.g. Chung et al., pg. 1203, Abstract, pgs. 1206, 1207, Table 1)(volatile components in blue crab meat (77) and crab processing byproduct (80), of which 58 were common to both, were identified). As such, it is unlikely that the components identified in the toluene extraction of a mixture of testicular and intestinal tissue from a male blue crab would all be present in testicular or intestinal tissue alone and/or in the same amounts or ratios as in testicular or intestinal tissue alone. Thus, identification of the components found in said toluene extraction would not be predicative of what components and amounts thereof would be found in testicular or intestinal tissue alone. The prior art of record does not set forth a process by which the components in testicular and intestinal tissue of male blue crab can be separated and purified.

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As such, predictability in the art is low as to what components and combinations of components, or isolates of testicular or testicular and intestinal material from a blue crab, and amounts thereof, would be able to be separated and purified from said tissue and/or would be effective in attracting female blue crabs.

The amount of direction or guidance present and the presence or absence of working examples:

The only working example is a solution produced from a toluene extraction (non-solid) of intestinal and testicular tissue of male blue crab that apparently contains every component listed in claim 1 or non-rotting testicular tissue from a male blue crab in a gelatin mold; however, neither the working examples nor the rest of the Specification or claims indicate the amounts of the components contained in the compositions or the amount of the compositions used to attract the female blue crabs other than that an effective amount be used which attracts female blue crabs. The examples only indicate that the components in claim 1 were identified in the toluene extraction (non-solid) of the combination of intestinal and testicular tissue. The examples do not provide any evidence as to which components separately or mixtures of components would be obtained from testicular tissue alone or intestinal tissue alone. The examples do not provide any evidence that the identified components would be able to be separated and purified from said tissue. The general statement in the Specification that the components can be purified from a natural source according to methods well known in the art does not provide any evidence of the same and the prior art of record does not provide any means or process for separating and purifying said components from testicular and/or intestinal tissue of a male blue crab. Even if said components could be separated and purified from said tissue, the examples do not provide

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any evidence as to which of the components or mixture of components and amounts or ratios of said components from intestinal and/or testicular tissue from the male blue crab would be effective in attracting female blue crabs (as indicated above, the Specification, including the examples, and claims do not indicate how much of the compositions were used or the amount or ratio of the components contained therein other than that an effective amount was used).

The breadth of the claims and the quantity of experimentation needed:

The claims are broad in that they claim any combination of components and any ratio or amounts of the components produced from the intestinal and testicular tissue of male blue crab or any isolate from testicular or testicular and intestinal tissue that may or may not contain one or more components listed in claim 1 in a homogenous emulsion. As such, it appears that one of ordinary skill in the art would be required to do undue experimentation in order to determine what components, isolates and combinations thereof and amounts and/or ratios thereof that would be able to be separated and purified from said tissue and/or would be effective in attracting female blue crabs.

The Examiner has duly considered the Applicant's arguments but deems them unpersuasive.

The Applicant has provided no evidence that it would take routine experimentation to isolate, separate and purify each of the components from the other components from a composition produced from intestinal and testicular tissue of the male blue crab. Identification of the components only indicates what is contained in said composition produced from said tissue it does not provide the means for separation and purification of said components from each other or identify which components or combination of components and amounts thereof which

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are actually responsible for the attractant effect on female blue crabs. The general statement that methods of purification are well known in the art does not provide evidence that one of ordinary skill in the art would be able to separate and purify the identified components, much less the components which are actually effective in attracting the female blue crab. As indicated above, the prior art of record does not provide a means or process for the same and that the active compounds present in the male blue crab attractant odor are not known. With respect to the claims directed to the homogenous emulsions of either isolates of testicular tissue or isolates of testicular and intestinal tissue, there is no indication as to what components, amounts or ratios are contained therein. The analysis and testing of the composition was performed on a solution obtained from stirring or sonication of the combination of intestinal and testicular tissue in toluene. The only example provided in which intestinal material was not used was the use of non-rotting testicular material (i.e. solids) dissected from a male blue crab in a gelatin mold. There is no indication from the Specification as to what components, amounts and ratios are contained in testicular tissue versus intestinal tissue. As indicated above, it is unlikely that all of the components claimed in claim 1 would be present in both testicular and intestinal tissue and/or in the same amounts and ratios in both testicular and intestinal tissue. Further, the claim encompasses but is not limited to soluble or insoluble material, or one or a mixture of components, or even the components or mixture of components listed in claim 1. As such, the examples do not provide evidence commensurate in scope with the claims that a homogenous emulsion containing any isolate of testicular or testicular and intestinal material would be effective attracting female blue crabs. Further, as indicated above with respect to claims 1,3,4, the Specification and prior art of record does not provide evidence that would enable one or

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ordinary skill in the art to separate and purify the components or mixture of components that are encompassed by the scope of claims 5-8. As such, the scope of enablement rejection herein is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Chung et al..

Chung et al. expressly discloses that blue crab meat contains nonadecane and pyrazine and that crab processing by-products contain heneicosane and pyrazine (Page 1206, Table 1).

The examiner has duly considered the Applicant's arguments but deems them moot in light of the new grounds of rejection. Although claim 1 indicates that the composition is produced from intestinal and testicular tissue of a male blue crab, the claim does not require that non-identified components that may be present in intestinal and/or testicular tissue be present in the claimed composition and the claim is open to other materials. Further, the claim does not require that the components be present in amounts that would be effective in attracting female blue crabs. As such, even though the crabmeat does not appear to contain components produced from intestinal and testicular tissue and there is no evidence that the crab processing by-products contain intestinal or testicular material, the prior art products fall within the scope of the claimed invention because they contain at least two of the claimed components as indicated above. In any case, even if the claim did require an effective amount to attract female blue crabs, since the

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crab meat and process by-product contains at least two of the claimed components, the burden would still be on the Applicant to provide evidence that the prior art products would not attract female blue crabs. See *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980); *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977).

Conclusion

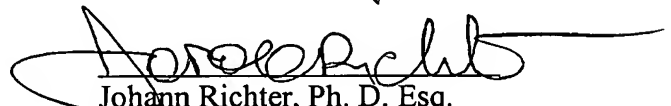
A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier number for accessing the facsimile machine is 571-273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Choi whose telephone number is (571)272-0610. Examiner maintains a compressed schedule and may be reached Monday, Tuesday, Thursday, Friday, 6:00 am – 4:30 pm (EST).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Dr. Johann Richter, can be reached at (571)272-0646. Additionally, Technology Center 1600's Receptionist and Customer Service can be reached at (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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October 13, 2006


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